

TOP SECRET

25X1

P 271524Z
FM NPIC

1964 JUN 27 16 45Z

29 JUN 1964

AFSSO USAF
AFSSO USAF
AFSSO PACAF

multi

OUT53661

Declassification Review by NGA/DoD

OPCEN
YWQLAZC/AFSSO SAC
YWQLAZC/AFSSO ACIC
YWQLAZC/AFSSO FTD
ZEM
TOP SECRET

25X1
RTS
COS
25X1
CFC
FNS
ACL

Grace (F125X1

RELEASABLE FROM SSO CHANNELS. SSOS PASS

25X1

TO APPROPRIATE TCOS. CITE NPIC 2500.

SUBJECT: CAMERA INFORMATION FOR MISSION 1007-1.

A. THIS PHOTOGRAPHY INVOLVES THE USE OF EIGHT CAMERAS: TWO MAIN CAMERAS, FOUR HORIZON CAMERAS, A STELLAR CAMERA, AND AN INDEX CAMERA.

B. OPERATIONAL FOCAL LENGTHS (MM))

	HORIZON				
	MAIN	PORT	STARBOARD	STELLAR	INDEX
FWD UNIT	609.602	54.4	54.53	83.918	37.958
AFT UNIT	609.602	54.33	54.51		

C. LENS DISTORTION (PIN CUSHION) MM

	DEGREES					
(1) MAIN LENS	3	2	1	0	359	358 357

25X1

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TOP SECRET

Excluded from automatic
downgrading and
declassification

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FWD UNIT .005 .004 .002 .000 .001 .002 .003

AFT UNIT .003 .002 .001 .000 .002 .003 .005

(2) HORIZON CAMERAS (MM)		FWD		AFT
	PORT	STARBOARD	PORT	STARBOARD

(RADIAL) 10 DEG .007 MM .001 MM .004 MM .006 MM

20 DEG .019 MM .001 MM .005 MM .017 MM

(TANGENTIAL) MAX VECTOR .009 MM .008 MM .002 MM .006 MM

D. DEPRESSION ANGLES OF HORIZON CAMERAS RELATIVE TO NOMINAL
MAIN CAMERA.

	PORT	STARBOARD
FWD	15 DEGREES 21' 56"	15 DEGREES 18' 47"
AFT	14 DEGREES 54' 34"	15 DEGREES 10' 32"

E. CAMERA FILTER AND EXPOSURE DATA

	MAIN	HORIZON	STELLAR	INDEX
	AFT WRATTEN 21			
FILTER	FWD WRATTEN 25	WRATTEN 25	NONE	WRATTEN 21
APERTURE	F 3.5	PORT F 6.8	F 1.8	F 4.5
	STARBOARD F 8.0			

SLIT WIDTH/EXPOSURE FWD .250 INCHES

AFT .200 INCHES 1/100 SEC 2.0 SEC 1/500 SEC

FILM SO 132 SO 132 SO 102 SO 130

F. RESOLUTION CAPABILITIES

(1) (L/MM AVG)	MAIN	PORT HORIZON	STARBOARD HORIZON
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FWD	165	117	116
AFT	159	118	123

(2) INDEX (L/MM AWAR) 72

G. TIMING MARKS

FREQUENCY MARKS WILL APPEAR ON THE FILM AT A RATE OF 200 CYCLES PER SECOND.

H. CALIBRATED ANGLES OF CAMERAS

(1) CALIBRATED CONVERGENT ANGLE OF MAIN CAMERAS 29 DEGREES 57.66 MIN.

(2) CALIBRATED ANGLE BETWEEN STELLAR AND INDEX CAMERAS 89 DEGREES 57.8 MIN

(3) STELLAR (LOC. OF P.P.) SEE REMARKS, NOTE 1.

(4) INDEX (LOC. OF P.P.) SEE REMARKS, NOTE 1.

I. IMAGE MOTION COMPENSATION DATA

A. CYCLE RATE (CPS) AND GROUND ANGULAR VELOCITY (GAV IN RAD/SEC)

REF. LEVEL			AMPL. LEVEL		
NO.	CPS	GAV	NO.	CPS	GAV
11	0.2635	0.0238	1	0.1962	0.0177
11	0.2641	0.0239	2	0.1815	0.0164

B. PASSES: REF 11, AMPL. 1 : 1D1 THRU AND INCLUDING 25D1.

REF 11, AMPL. 2 : 36D1 THRU AND INCLUDING 57D1.

J. PROGRAM TIME DATA

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PASS	CAMERA ON TIME				PROGRAM ON TIME	PROGRAM
	(ZEBRA TIME)				UP RAMP	DURATION
	DAY	HOUR	MIN	SEC	(SEC)	(SEC)
1D1	20	00	48	35	2121	37
2D1	20	02	14	30	1807	157
6D1	20	08	22	53	2085	99
6D2	20	08	25	35	2247	184
7D1	20	09	53	25	2062	419
8AE	20	11	03	33	814	46
9D1	20	12	54	08	1993	290
20D1	21	05	36	38	2138	129
21D1	21	07	07	51	2157	303
22D1	21	08	37	38	2089	84
22D2	21	08	41	33	2324	83
23D1	21	10	08	37	2091	98
23D2	21	10	10	51	2224	228
24AE	21	11	19	21	880	46
24D1	21	11	37	40	1980	348
25D1	21	13	11	21	2142	128
36D1	22	05	47	10	1901	85
36D2	22	05	52	39	2229	186
37D1	22	07	23	22	2215	375

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38D1	22	08	53	04	2144	84
38D2	22	08	55	17	2276	361
39D1	22	10	24	03	2150	81
40AE	22	11	34	44	937	45
40D1	22	11	54	43	2137	273
41D1	22	13	25	55	2156	113
52D1	23	06	01	31	1911	132
52D2	23	06	06	02	2183	320
53D1	23	07	38	13	2259	83
53D2	23	07	40	55	2420	302
54D1	23	09	08	10	2203	97
54D2	23	09	10	23	2337	360
55D1	23	10	38	52	2193	245
56AE	23	11	49	49	997	46
56D1	23	12	06	48	2016	423
57D1	23	13	41	41	2258	114

K. TIME CORRELATION (MILLISECONDS)

PASS	SYSTEM TIME	CLOCK TIME	DIFFERENCE
8	39673.745	367742.841	MIN
8	39772.580	367841.674	MINUS 0.002
16	85104.202	413173.281	MINUS 0.015

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24	40615.175	455084.243	MINUS 0.011
31	80579.545	495048.414	MINUS 0.199
40	41642.560	5640.492	MINUS 0.026
47	81392.310	45390.253	PLUS 0.011
56	42548.905	92946.792	MINUS 0.056

L. REMARKS

NOTE 1. SINCE PARA H, ITEMS 3 AND 4 (STELLAR AND INDEX LOC. OF P.P.) ARE OBTAINABLE FROM THE CAMERA CALIBRATION REPORT, THESE ITEMS WILL NO LONGER BE INCLUDED IN THIS CABLE.

NOTE 2. THE DATA IN PARA J (PROGRAM TIME DATA) IS THE SAME FOR BOTH THE FWD AND AFT CAMERAS.

SCP-1

T O P S E C R E T

END OF MESSAGE

SIG CEN NOTE: ABOVE MSG ALSO SENT TO

25X1

25X1